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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

HENDRICKS, KEITH D

ART UNIT PAPER NUMBER

1761

DATE MAILED: 09/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/966,949

Applicant(s)

SIMONSEN ET AL

Examiner

Keith Hendricks

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-20 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7. 6) ☐ Other:

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5 and 13-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 5, the phrase “further *comprises* one or more waxes, polypeptides, *and* carbohydrate polymers” (emphasis added) is an improper Markush-type recitation of the claim element options. Open-set groupings, such as “comprises”, should be listed in the alternative (“or”). Closed-set groupings (e.g. “consisting of”) should be recited using the term “and”.

Claim 13 is indefinite and confusing in its structure, as the intended metes and bounds of the claimed invention are unclear. The claimed method is recited as “comprising *one or more of the following steps*”, yet provides for (a) *and* (b) *and* (c). This implies that each of the recited steps are required; however, due to the phrase “one or more of the following steps”, it is unclear if each step should be performed, and if so, whether they are intended to be sequential. For example, part (b) recites “applying a second coating material”, yet this may not be performed if a first coating material is not applied. Thus, this indicates that step (a) must first be carried out. See also claim 14. Similarly, step (c) may not take place without step (b). See also claims 15-16.

### *Claim Objections*

Claims 4 and 11 are objected to because of the following informalities. Appropriate correction is required.

- In claim 4, end of line 1, the term “in” should be “is”.
- In claim 11, line 2, it is believed that the term “comprised” should be “comprises”. See claim 12.

*Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

i) Claims 1-3, 5-10, 13-15 and 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Mishima (JP 11-197494).

Mishima discloses a method for producing a microcapsule comprising a coating material, a gas phase component and an active core material. As an example, “organic solvents and nitrogen gas are added to supercritical fluids such as carbon dioxide... to prepare a coating composition” (abstract). Once manufactured, the coated particles are used in “functional foods, a functional medicine, cosmetics,” etc. (paragraph 0001, translation). The core component may comprise inorganic or organic substances, such as proteins, enzymes, flavonoids, food additives, drugs and perfumes (par. 0021-0022). The core material is coated or encapsulated by the coating material, which may be one of any number or type of materials, including polyethylene glycol (PEG), “starch, celluloses, a saccharide, chitins, a polypeptide” or other such materials (par. 0024). The invention “controls the property of the microcapsule generated in the above-mentioned method by controlling at least one of working pressure, temperature, fluid stirring, [and] composition” (par. 0017). Compounds in the gas state, or supercritical fluids, are mixed with the coating compound under high pressure. Such gases include carbon dioxide, methane, propane and ammonia (par. 0019). Additional solvents and gases may be incorporated into the coating material, including alcohols, ammonia, oxygen and nitrogen (par. 0020). Specifically exemplified are PEG with carbon dioxide used to coat a flavonoid compound.

“High pressure is used for implementation of [the] coating”, where the coating material is expanded quickly upon pressure release (par. 0025-0056). The suggested maximum working pressure is 41.5 MPa (par. 0033), and the maximum pressure of the exemplified system is 39.2 MPa. “As for a pressure, it is desirable that it is 7.2 – 30 MPa [ $7.2 \times 10^6$  –  $3.0 \times 10^7$  Pa] in order to perform rapid expansion of supercritical fluid efficiently” (par. 0046), thus meeting the limitation of instant claim 18. Stepwise decompression is disclosed in order to add coating materials as well as to expand the coating materials, and relief valves are disclosed “in order to prevent explosion by the pressure buildup in a cell.” Desirable temperatures are utilized within the range of 273-353 K (31°F-175°F). Thus, as several volatile components are disclosed for use in the coating material, and heating is utilized in the pressure cell

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equipment, the limitations of instant claims 14-15 have been met. Furthermore, given the fact that the same methods and starting materials are utilized in both the reference and the claims, it would follow that the coating material disclosed in the reference meets the limitation of instant claim 3, having "a true density below 0.8 g/cm<sup>3</sup>".

Thus the claimed invention is anticipated by the reference.

ii) Claims 1-3, 5-6, 8-11, 13-14, 16-17 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Thoen et al. (WO 99/27063).

Thoen et al. disclose a "multi-layer detergent tablet having both compressed and non-compressed portions." The portions contain a "detergent active" (pg. 3). "The detergent active component(s) may be in any form for example particulate (i.e. powder or granular), gel or liquid form", and "may also optionally comprise a carrier component" (pg. 10, ln. 8-11). The "detergent active component(s) present in the compressed layer may optionally be prepared in combination with a carrier and/or a binder for example polymer (e.g. PEG). The detergent active components are preferably prepared in particulate form (i.e. powder or granular form)" (bottom pg. 8; also pg. 10 with reference to the non-compressed portion). "The compressed solid body portion may also be provided with a coating of a water-soluble material to protect the body portion." Preferred coating layers include fatty acids, alcohols, and polyethylene glycol (PEG). See pages 9 and 14-16. Solvents are optionally included in the composition (pg. 14). The non-compressed portion is preferably coated with a coating layer, where said portion "comprises flowable particles, gels or liquids." "Preferred coating layers comprise materials selected from the group consisting of fatty acids, alcohols... and polyethylene glycol (PEG) (pg. 15). "The coating layer may also preferably comprise a disrupting agent" (pg. 16). "The disrupting agent may be a disintegrating or effervescing agent." "Suitable disintegrating agents include starch, starch derivatives, alginates, carboxymethylcellulose (CMC)," etc. "Suitable effervescing agents are those that produce a gas on contact with water. Suitable effervescing agents may be oxygen, nitrogen dioxide or carbon dioxide evolving species. Examples of preferred effervescing agents may be selected from the group consisting of perborate, percarbonate, carbonate, bicarbonate and carboxylic acids such as citric or maleic acid." As noted at page 3 of the reference with regard to the detergent actives, "when a disrupting agent is included, the disrupting agent is preferably a salt of carbonate or bicarbonate and an organic acid."

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mishima (JP 11-197494), in view of Selenke (US PAT 4,022,917).

Mishima is taken as cited above.

Selenke teaches a process for preparing a premixed batter, comprising "a quantity of powdered edible acid", where "particles of alkaline leavening agent, encapsulated in a water insoluble coating are added to the batter" (abstract). Typical leavening agents include sodium bicarbonate, which "is suspended in the batter in small micro-spheres or particles coated or encapsulated in a normally water-insoluble edible material capable of dispersion in said batter" at a given temperature (col. 2-3).

As stated previously, Mishima teaches that once the desired coated particles are manufactured, they are used in "functional foods, a functional medicine, cosmetics," etc. The core component of Mishima may comprise inorganic or organic substances, such as proteins, enzymes, flavonoids, food additives, drugs and perfumes (par. 0021-0022). As Selenke teaches a process for preparing a premixed batter, comprising "particles of alkaline leavening agent, encapsulated in a water insoluble coating", it would have been obvious to one of ordinary skill in the art to have utilized the microcapsules of Mishima et al. for use in various foodstuffs, including batter doughs such as those disclosed by Selenke. The use of such coated particles within flour doughs/batters would not have involved an inventive step in the art.

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*Conclusion*

Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. While light spheres were known in the art for providing gas phase components, there was no suggestion in the art to utilize such within coating compositions to further provide coated active particles.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keith Hendricks whose telephone number is (703) 308-2959. The examiner can normally be reached on M-F (8:30am-6pm); First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on (703) 308-3959. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

  
KEITH HENDRICKS  
PRIMARY EXAMINER